

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: January 16, 1997  
Date Received: January 9, 1997  
Project: Metro Self Monitor, PO #M55671  
Date Samples Extracted: January 10, 1997  
Date Extracts Analyzed: January 13, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, AND ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005A  
Results Reported as mg/L (ppm)**

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M55671	0.33	0.25	0.37	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
(METHOD 6010)**

Laboratory Code: 74779 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.33	0.31	6	0-20
Copper	mg/L (ppm)	0.25	0.25	0	0-20
Nickel	mg/L (ppm)	0.37	0.34	8	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 74779 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.33	102	101	80-120	1
Copper	mg/L (ppm)	5	0.25	102	100	80-120	2
Nickel	mg/L (ppm)	10	0.37	100	98	80-120	2
Zinc	mg/L (ppm)	5	<0.05	102	99	80-120	3

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	107	102	80-120	5
Copper	mg/L (ppm)	5	106	99	80-120	7
Nickel	mg/L (ppm)	10	106	101	80-120	5
Zinc	mg/L (ppm)	5	106	103	80-120	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.



**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Beth M. Albertson, M.S.  
Bradley T. Benson  
Kelley D. Wilt

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044

**January 16, 1997**

**INVOICE # 97ACU0116-1  
DUPLICATE COPY**

**Accounts Payable  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134**

**RE: Project Metro Self Monitor, PO #M55671: Results of testing requested by  
Gerry Thompson, Project Manager for material submitted on January 9,  
1997.**

**1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$65 per sample**

**\$ 65.00**

**Amount Due .....**

**\$ 65.00**

**FEDERAL TAX ID #(b) (6)**



**FRIEDMAN & BRUYA, INC.**

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January 16, 1997

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on January 9, 1997 from your Metro Self Monitor, PO #M55671 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to read 'Kurt Johnson', with a stylized flourish at the end.

Kurt Johnson  
Chemist

keh  
Enclosures  
ACU0116R.DOC